

WHAT IS CLAIMED IS:

1. An apparatus for allocating data streams for use by a plurality of consumer electronic devices, comprising:

external-side data ports for transferring data between a plurality of external bandwidth channels and said apparatus;

one or more user data ports for bi-directional data transfer between said apparatus and at least one end-user device; said end-user device sending a data request for data to be transferred from an external source;

determining means for determining the means for executing said data request on the basis of the external source and the available bandwidth for each of the external bandwidth channels currently connected to said external-side data ports; and

a switch for connecting the requesting end-user device to the external bandwidth channels determined by said determining means such that said data request is sent to said external source and the data is transferred accordingly.

2. The apparatus according to claim 1, wherein said external-side data ports include connections for download-only and bi-directional external bandwidth channels.

3. The apparatus according to claim 1, wherein said apparatus is a set-top box.

4. The apparatus according to claim 1, wherein said external bandwidth channels include internet, telephone, and cable channels.

5. The apparatus according to claim 1, wherein said end-user device is a telephone, television, computer, or communication device.

6. A method for efficient data transfer through a set-top box between a plurality of external sources and at least one end-user device, comprising the steps of:

sending a data request from said end-user device to said set-top box for data to be transferred from one or more of said external sources;

determining the means for executing said data request on the basis of the external source and the available bandwidth for each of a plurality of external bandwidth channels currently connected to said set-top box;

allocating said external bandwidth channels according to the determined means for executing said data request;

connecting said end-user device to the allocated external bandwidth channels;

sending said data request to the external source in accordance with the allocated external bandwidth channels; and

transferring data from the external source to said end-user device in response to said data request.

7. The method according to claim 6, wherein said set-top box has a plurality of connections for download-only and bi-directional external bandwidth channels.

8. The method according to claim 6, wherein said external bandwidth channels include internet, telephone, and cable channels.

9. The method according to claim 6, wherein said end-user device is a telephone, television, computer, or communication device.